



National Aeronautics and
Space Administration

EXPLORE SCIENCE

**Foundation for Assessing the Health and Vitality of
the NASA SMD's Research Communities Meeting**

Dr. Thomas H. Zurbuchen

Associate Administrator

NASA Science Mission Directorate

 @Dr_ThomasZ

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Key Science Themes

PROTECT & IMPROVE
LIFE ON EARTH &
IN SPACE



SEARCH FOR LIFE
ELSEWHERE



DISCOVER SECRETS
OF THE UNIVERSE



NASA Science Strategic Approach

VISION

Lead a globally interconnected program of scientific discovery that encourages innovation, positively impacts people's lives, and is a source of inspiration

MISSION

Discover the secrets of the universe

Search for life elsewhere

Protect and improve life on Earth and in Space

VALUES

Excellence

Inclusion

Leadership

Integrity

Teamwork

Safety

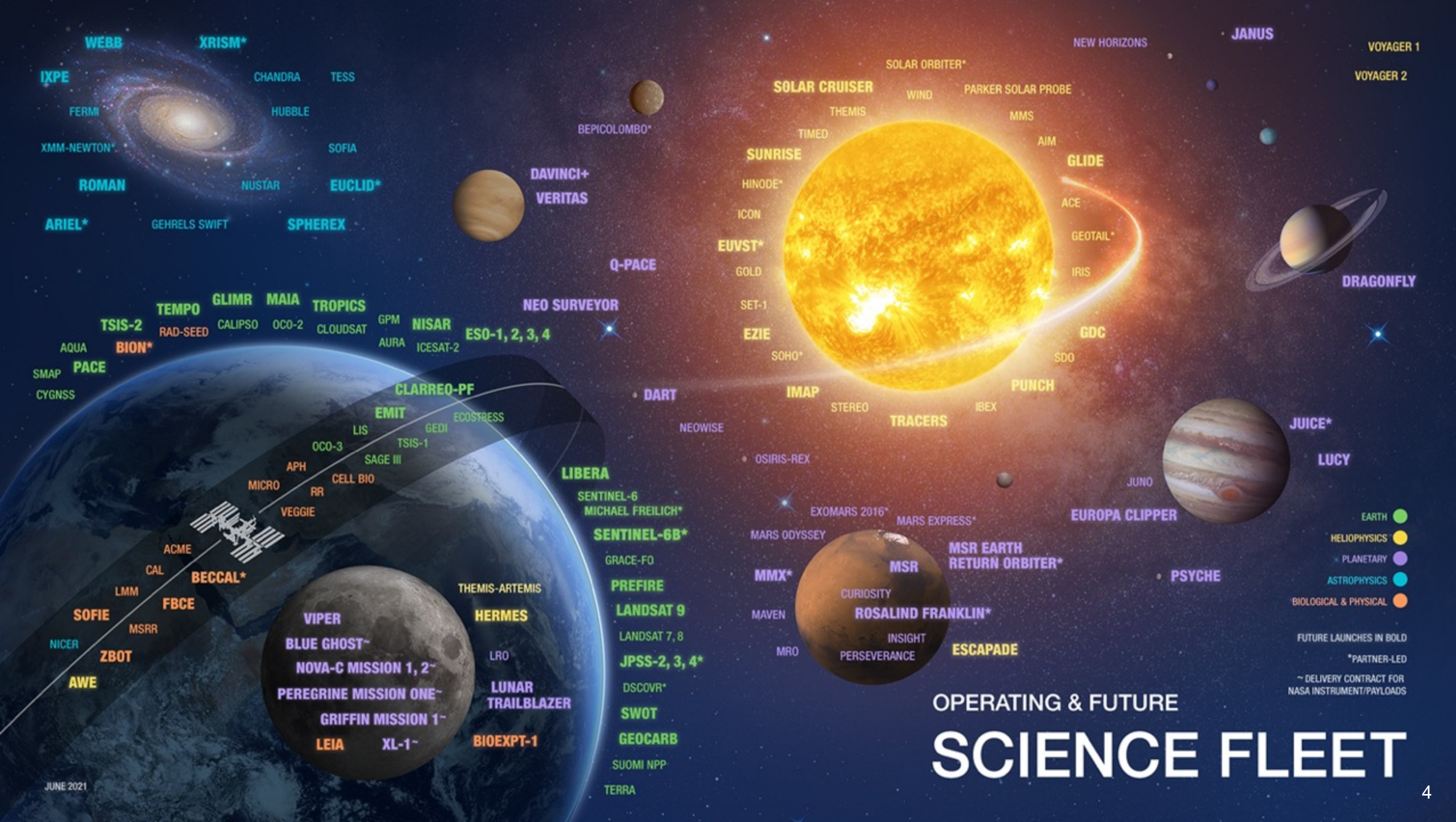
PRIORITIES

Exploration and Scientific Discovery

Innovation

Interconnectivity and Partnerships

Inspiration





Assessing the Health and Vitality of SMD's Research Communities

- The National Academies of Sciences, Engineering, and Medicine will appoint an ad hoc committee to address the topic of “Building a Foundation for Assessing the Health and Vitality of the Science Mission Directorate’s Research Communities”
- This study will define the data that NASA needs to collect to enable each decadal survey to conduct its own analysis of its research community’s health and vitality
- This committee will recommend actions to improve the health and vitality of the communities of researchers to aid in the accomplishment of the NASA research objectives

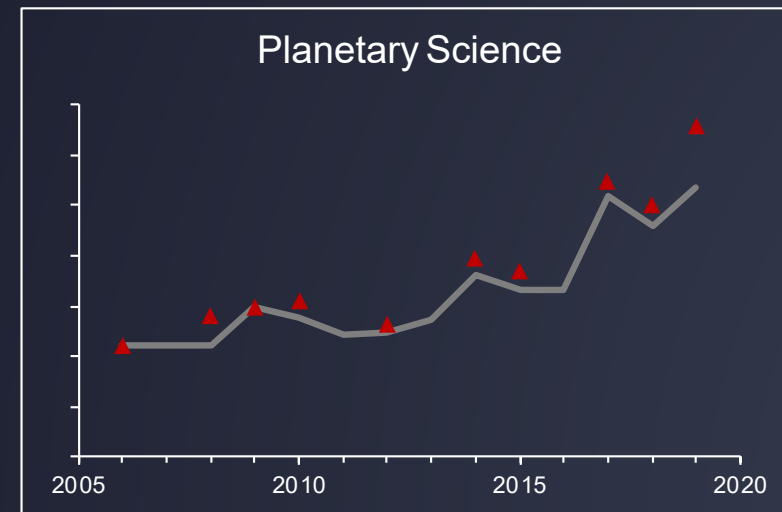
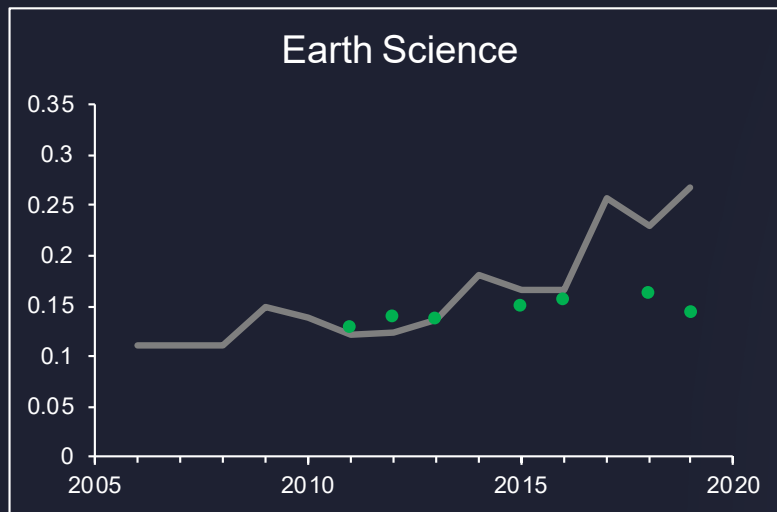
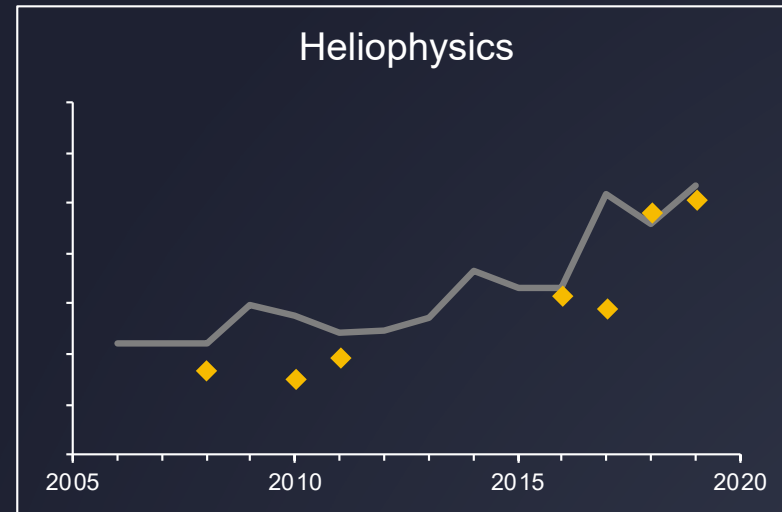
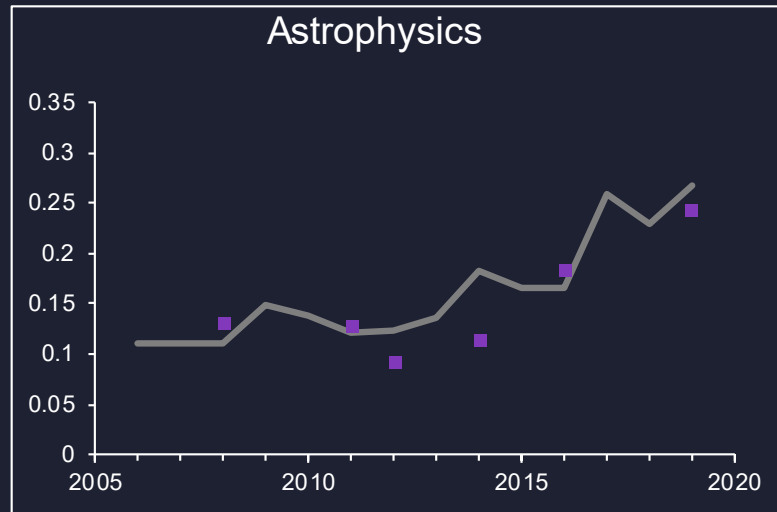
Committee Tasks

To accomplish this task the committee will:

1. Identify the characteristics of a healthy and vital research community
2. Define implementable measures for assessing the health and vitality of a research community based on the above-identified characteristics, considering demographics, career-stage structure, distribution of “hard money” and “soft money” positions, relative dominance of NASA Centers in performing research in the discipline, fraction of funding for the discipline provided by NASA relative to other funding agencies, and other relevant variables
3. Based on the above-identified measures, enumerate the types of data that NASA should be collecting to enable future assessments of the health and vitality of the scientific work force and any statutory, regulatory or policy impediments to collecting those data. Recommend practical and actionable approaches that, if implemented, would reduce the identified impediments
4. Recommend and prioritize best practices for NASA to use to improve the health and vitality of its research communities

Science Teams: 2006-present AO Participation by Women/Submission Year

Percentage Inferred Women in Science Team

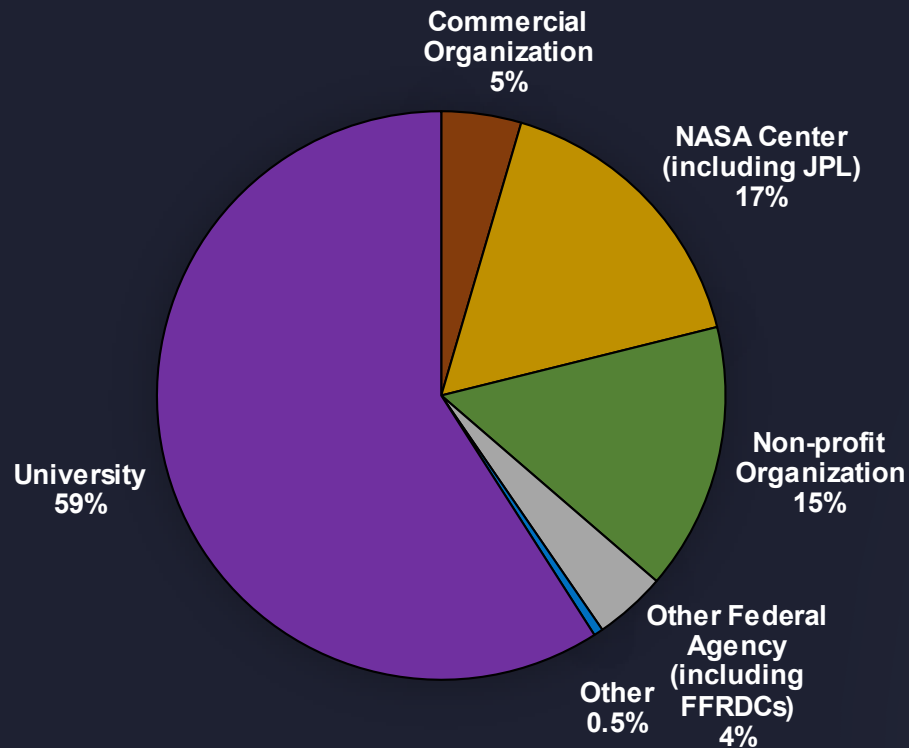


- Astrophysics
- Earth Science
- ◆ Heliophysics
- ▲ Planetary Science
- SMD

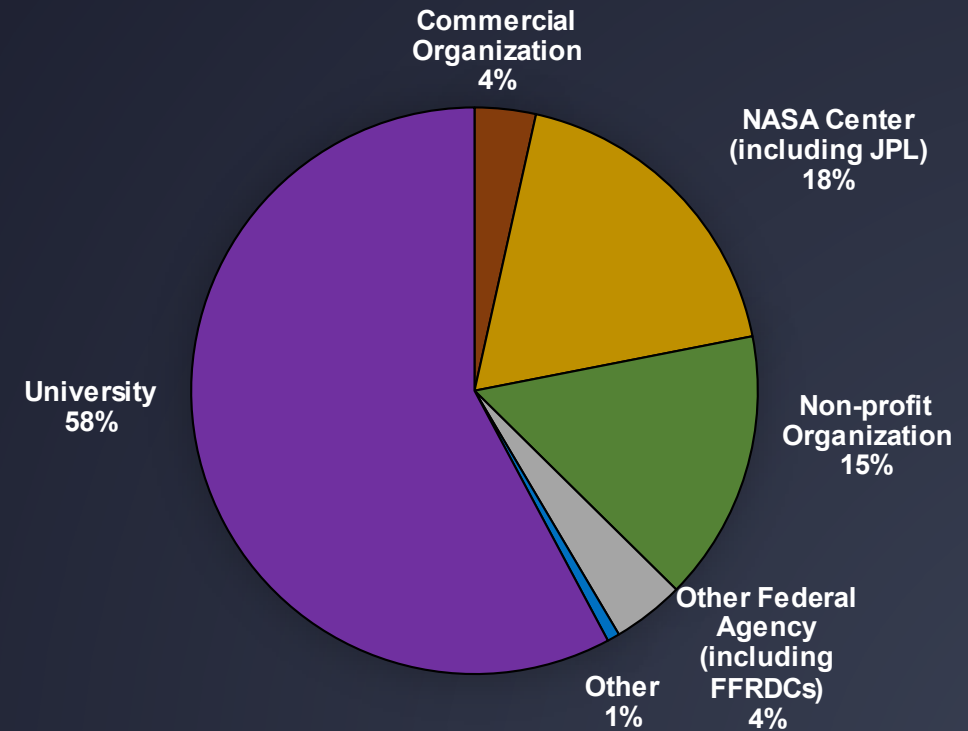
Submission Year

2014 - 2019 ROSES R&A Proposals by Institution Type

Submitted Proposals



Selected Proposals



Submission and Selection Rate by Institution Type 2014–2019

Institution Type	Number of Submitted Proposals	Percent of Submitted Proposals	Number of Selected Proposals	Selection Rate
Commercial Organization	1,162	5%	221	19%
NASA Center (including JPL)	4,242	17%	1,168	28%
Non-profit Organization	3,887	15%	980	25%
Other Federal Agency (including FFRDCs)	1,046	4%	260	25%
Other	136	1%	45	33%
University	15,106	59%	3,663	24%
Grand Total	25,579	100%	6,337	25%

Breakdown of R1 vs Non-r1 University Submissions & Selections, 2014-2019

Carnegie Classification	Number of Proposals Submitted	Percent of Submissions	Number of Proposals Selected	Percent of Selected	Selection Rate
R1	11,486	76%	2,898	79%	25%
Non-R1	3,620	24%	765	21%	21%
Grand Total	15,106	100%	3,663	100%	24%



SMD's Health & Vitality in Action: Connection to Equity

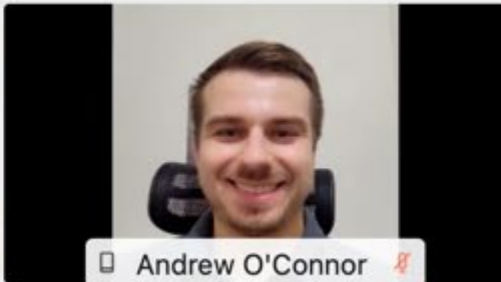
- Remains one of NASA's most direct mechanisms to impact the scientific community and represents an opportunity to gauge and advance equity
- Seeks to reflect the diversity of the Nation in the pool of proposers, awardees, reviewers and leadership of missions
- Aims to increase proposals from smaller institutions through meaningful relationship building and transparent communication
- Provides flexibility and opportunity to better achieve work-life balance
- SMD lead efforts, like PI Launchpad, yield important insights about individual participation in scientific research



Allison Fox



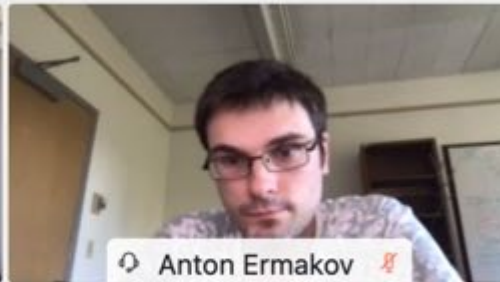
Amanda Brecht



Andrew O'Connor



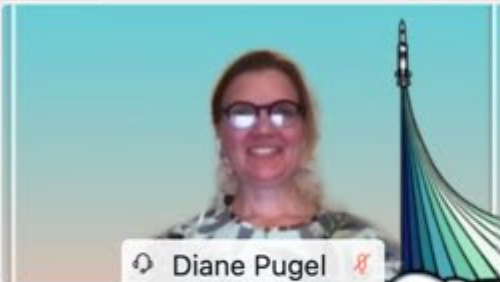
Andrés A. Plazas...



Anton Ermakov



Aubrie Orourke



Diane Pugel



Ella Sciamma-O'B...



Emilie Royer



Fabia Ursula Batti...



Farrukh Chishtie



Gregory Mosby



James Wray



Jessie Christiansen



Laura Mayorga



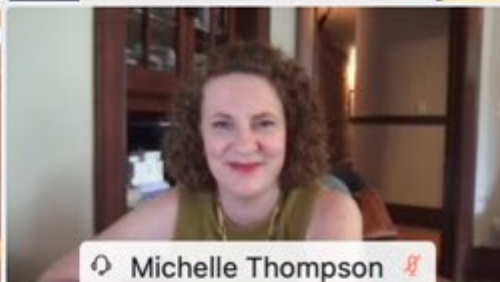
Linda Krause



Majd Mayyasi



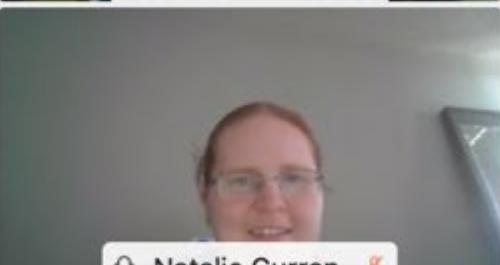
michael kirk



Michelle Thompson



Miki Nakajima



Natalie Curren



Odelle Coddington



Paul Sava



Rebecca Filkett



Laura Mayorga (E)

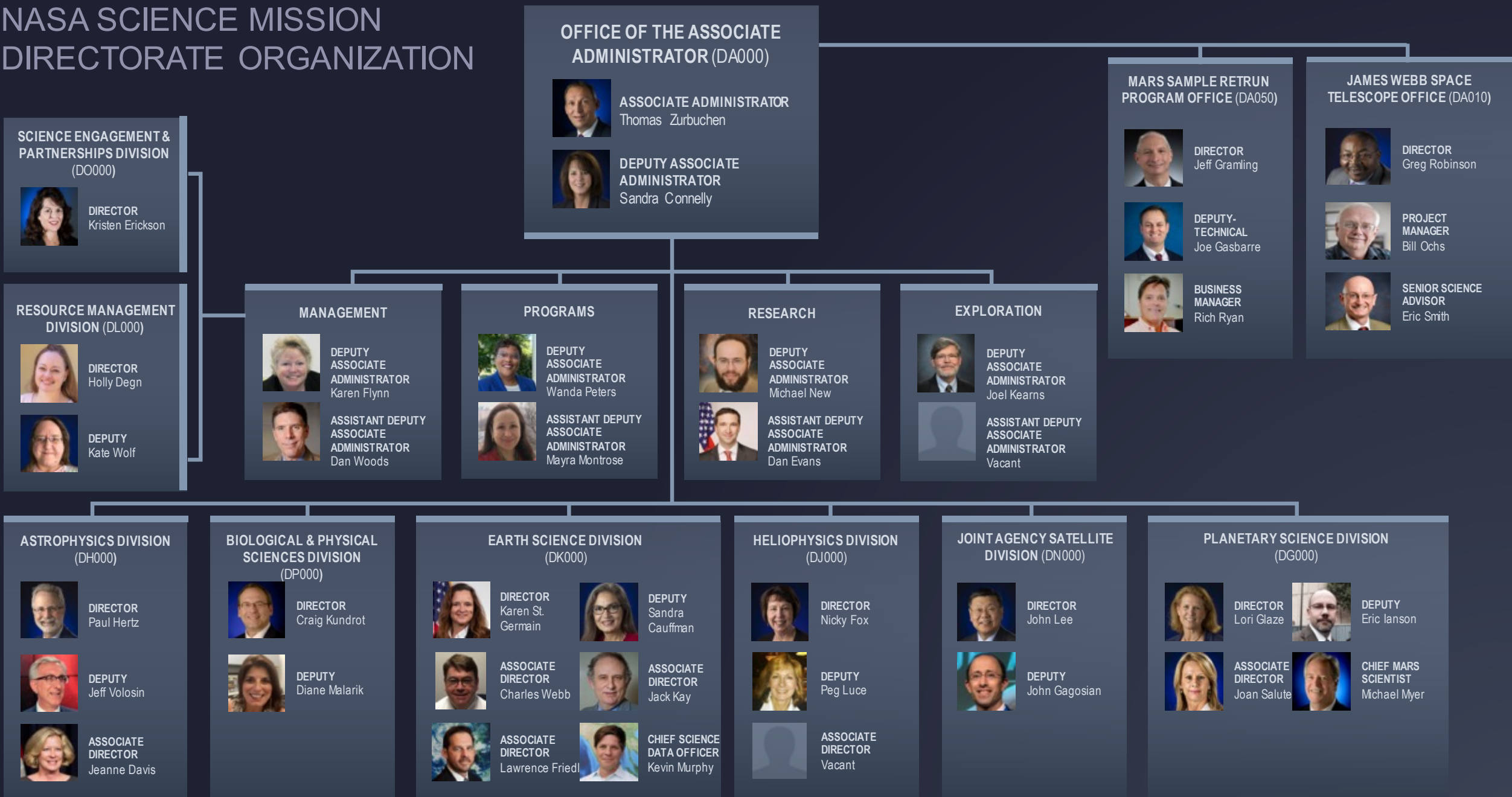
PI Launchpad Workshops

In 2019, NASA SMD organized a PI Launchpad Workshop for researchers and engineers interested in submitting a NASA space mission proposals. The goal was to broaden the pool of potential NASA space mission PIs and make the process more transparent and accessible.

This year, the PI Launchpad was held virtually and designed to increase diverse participation and inform the next generation of mission PIs on SMD's emphasis on inclusion and diversity:

- Occurred over a two-week period in smaller segments of time to encourage broader participation with captioning provided; presentations and panels were recorded and posted online
- Engaged more heavily with professional associations and affinity groups to encourage participation
- Built a stronger social media campaign surrounding the application process
- Increased the amount of time to submit applications
- Requested past participants to help promote the event and encourage those they might know to apply

NASA SCIENCE MISSION DIRECTORATE ORGANIZATION



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